

14.0 OFFSITE SOIL STOCKPILE AREA WORK - AIR/WORKPLACE SAMPLING AND MONITORING

14.1 Action Levels and Method of Determination

COCs and action levels are listed in Sections 4 and 5.

14.2 Air Sampling and Monitoring Plan

Air sampling and monitoring to ensure compliance with the project performance standards will be conducted. Air sampling and monitoring will be performed during soil remedial action and placement activities at the soil stockpile area to ensure that there is no fugitive dust from the impacted soils or fill materials. Real-time particulate samplers and monitors will be utilized during the operations as detailed below.

14.2.1 Real-Time Particulate Monitors

On-site sampling and monitoring of dust levels is planned. Special considerations will be applied during earth moving operations (excavation, contaminated soil loading and unloading, and unloading of clean soil). Dust sampling and monitoring will be conducted with dust meters (i.e. Dust Trak model 8530 or model 8532 dust meters or equivalent) as a means of documenting concentrations of airborne dust. The parameter total particulate matter will be used to measure dust in the air. Dust readings will be recorded on Site specific dust sampling and monitoring forms or in the field logbook.

At each property being excavated, real-time dust sampling and monitoring will be performed for the duration of earthwork activities at each property, beginning with excavation and continuing through the completion of backfill and topsoil placement. For properties being excavated, one unit will be placed in a downwind location and one at the nearest entrance to the residence. For properties being backfilled, one unit will be placed at the nearest entrance to the residence.

Air samplers will be placed each day prior to soil disturbance or placement activities and reviewed relative to the area-specific action level on hourly intervals during the work. The total particulate action level will be 150 micrograms per cubic meter (ug/m³) in the downwind area. If the action level is exceeded, work will be decreased and the dust suppression techniques will be correspondingly increased as needed to lower the dust levels below the action level. Dust sampling will not be conducted during a significant rain event and dust meters will be protected in place in the event of a sudden shower. Dust meters can be encapsulated in plastic, if necessary, ensuring no obstructions to the flow of the meter.

14.2.2 Lead and Arsenic Air Samples

In addition to real time dust monitoring, air samples for arsenic and lead will be collected at two locations throughout excavation activities. The samples will be collected from the same downwind and home entrance locations used for the total particulate units. Each arsenic and lead air sample will be collected on a Gilian Filter Cassette (or similar). The air samples for the first two weeks of excavation will be analyzed by a laboratory and data compared to air action level criteria. If the filter results show that engineering controls are working, then the subsequent air samples will be collected and stored and will only be

analyzed if the total particulate results exceed the action level at a given property. No arsenic or lead air samples will be collected during backfill activities.

14.3 Noise Monitoring

Noise monitoring will not be performed for this project unless conditions warrant it.

14.4 Heat/Cold Stress Monitoring

Heat and cold stress monitoring will be implemented if necessary. The protocols provided by the American Conference of Governmental Industrial Hygienists (ACGIH) will serve as guidance for dealing with heat and/or cold stress (see Appendix D).

15.0 OFFSITE SOIL STOCKPILE AREA WORK - PERSONNEL TRAINING

All personnel involved in field activities at the Offsite Soil Stockpile Area will be required to participate in a health and safety training program that complies with criteria set forth by OSHA in accordance with 29 CFR 1910.120(e) as described in Section 7 above.

15.1 Pre-assignment and Annual Refresher Training

Prior to arrival on site, each employer (subcontractor) will be responsible for certifying that his or her employees meet the requirements of 40/24-hour pre-assignment OSHA Hazardous Waste training. In addition, each employee must be able to provide documentation of the date of attendance at annual eight-hour OSHA Hazwoper refresher training and fieldwork experience under a qualified supervisor, as required by OSHA.

15.2 Site Supervisor Training

Consistent with OSHA 29 CFR 1910.120(e)(4), prior to arrival on site, individuals designated as site supervisors require an additional eight hours of specialized training.

15.3 Site Safety Officer Training

The Site Safety Officer must meet the requirements of Chemours Corporate Remediation Group (CRG) Standard HS-1001.

15.4 Initial HASP Review

This information is the same as that for Exterior/Excavation work tasks in Section 6.

15.5 Daily Briefings

Daily briefings will be conducted before each work shift at a location designated by the SSO or site supervisor. All personnel will attend this briefing in order to participate in field activities for that day. Attendance at the briefing will be documented in the Daily Safety Briefing Log (see Appendix A) or the SSO's field logbook.

15.6 Other Required Training

Site Orientation Training

The SSO or designee will provide a work area orientation to all project workers.

XRF Training for Soil Screening

The Parsons field staff members that will be operating XRF devices have already obtained their valid Indiana Division of Radiation Control radiological license.

HEPA Vacuum Use Training

Field staff members that will operate a HEPA Vacuum will read the manufacturers use manual and receive onsite training from an experience user.

15.7 Visitor Procedures

All on-site visitors will be escorted by a Parsons representative and will be required to review and agree to comply with provisions of this HASP. In addition, visitors will sign in and out of the site logbook.

15.8 Health and Safety Audits

See Section 7 of this plan. The site safety audit form is included in Appendix A.

16.0 OFFSITE SOIL STOCKPILE AREA WORK - SITE CONTROL/ILLUMINATION

Site control measures are as follows:

- SSO will depict the actual site layout in SSO logbook daily, or on site figures/plans and as needed thereafter.
- Appropriate containers will be used for collection of trash.
- Mobile phones will be established as the primary means of communication prior to the beginning of site work.
- The buddy system will be employed to the extent feasible to assist in event of an emergency.

16.1 Illumination

Hours of field operation: 7:00AM to 6:00PM (maximum)

Describe lighting source: Daylight

If required to complete outdoor activities after daylight hours or in low light conditions; adequate artificial lighting will be required for all activities. Auxiliary lighting may include area work lights (110v or battery powered), flashlights, battery powered lanterns and/or headlamps. Work to be performed indoors must have adequate illumination from residence lighting or the same types as above. See Section 5.3 of this HASP and refer to 29 CFR 1910.120 (m).

17.0 OFFSITE SOIL STOCKPILE WORK - DECONTAMINATION

17.1 Equipment Decontamination Procedures

Equipment decontamination procedures will be developed and made available from contractors for Parsons' review and acceptance for this project. Spent decontamination water will be containerized, labeled, manifested and disposed of as required by local, state and federal laws. All investigation and remediation derived wastes will be managed in accordance with the Waste Management Plan.

18.0 EXTERIOR WORK - SANITATION

Sanitation facilities will be provided and maintained by subcontractors during this project.

18.1 Potable Water

☐ Provided by Parsons ☐ Provided by site ☒ Provided by subcontractor

All potable water will be clearly marked, tightly closed, and equipped with a tap. Provisions will be made for sanitary storage and proper disposal of cups.

18.2 Non-potable Water

☐ Provided by Parsons ☐ Provided by site ☒ Provided by subcontractor

Non-potable water is not anticipated to be necessary during this project.

18.3 Toilet Facilities

☐ Provided by Parsons ☐ Provided by site ☒ Provided by subcontractor

18.4 Washing/Showering

Is project duration greater than six months? ☐ No ☒ Yes

Are showering facilities necessary? ☒ No ☐ Yes

☐ Provided by Parsons ☐ Provided by site ☐ Provided by subcontractor

18.5 Personal Hygiene

Prior to eating, drinking, or smoking, hands and face must be thoroughly washed.

Are hand-washing facilities necessary? ☐ No ☒ Yes

☐ Provided by Parsons ☐ Provided by site ☒ Provided by subcontractor

19.0 OFFSITE SOIL STOCKPILE WORK - EMERGENCY RESPONSE PLANNING

The tasks and subtasks of Section 19 are the same as those in Section 11 of this plan (above).

20.0 INTERIOR (INDOOR) WORK - HAZARD EVALUATION

The following sections detail specific safety topics for the Interior Work tasks: Indoors at Residences; Coordination, Sampling, Cleaning and Decontamination of Equipment. These section headings (Sections 20 through 27) are the same as those for Sections 5 through 11 (Exterior Work) and Sections 12 through 19 (Offsite Soil Stockpile Work) above.

20.1 Activity Hazard Analysis

Activity Hazard Analyses for the Interior Work tasks are provided in Appendix B. All site personnel should have reviewed this document and become familiar with any potential risks and appropriate controls.

Site SH&E hazards and risks are controlled using one or more of the control measures listed below (in order of precedence):

- **Engineer/design to eliminate or minimize hazards.** A major component of the design phase is to select appropriate features to eliminate a hazard/risk and render it fail-safe or provide redundancy using backup components.
- **Guard the hazard.** Hazards that cannot be eliminated by design must be reduced to an acceptable risk level by guards or isolation devices that render them inactive.
- **Provide warnings.** Hazards or risks that cannot be totally eliminated by design or guarding are controlled through using a warning or alarm device.
- **Provide special procedures or training.** When design, guarding, or warnings cannot eliminate hazards/risks, procedures, training, and audits must be developed to ensure safe and environmentally compliant completion of work. Training cannot be a substitute for hazard elimination when life-threatening hazards are present.
- **Personal protective equipment (PPE).** Depending on tasks being performed, differing levels of PPE will be required to protect workers from injury.

The Parsons TAG program will also be employed. The purpose of the TAG program is to improve and promote hazard recognition and encourage everyone to take personal responsibility for their safety and the safety of others. TAG does not require completing any forms, but it does require personnel to:

- **THINK** about the hazards associated with their task
- **ANALYZE** and find safe solutions
- **GO** ahead and complete their tasks safely

All significant changes to the scope of work or equipment that are not replacements in kind must be properly documented in accordance with the approved Management of Change program. This includes a deviation from an established process or technical standard, modification of existing technology, or demonstration of remediation in different equipment. The change approval will include documentation of any operating instructions required for the specific change and will ensure that the change has no adverse effects on safety, remedy quality, and the environment.

20.2 Chemical Hazards

20.2.1 Constituents of Concern (COCs) and Possible Unknown Substances

The COCs in soil include the metals arsenic and lead. Information on the two COCs is provided below. Data from 2017 work tasks and prior studies at Zones 2 and 3 of the USS Lead Site show no reason to believe that employees performing the exterior or interior work tasks may be exposed to either COC above the PEL or Action Level. However; proper training, sampling, monitoring and protection measures are detailed in this HASP and Appendices.

Chemical Hazards	Arsenic	Lead
OSHA PEL (mg/m3)	0.01	0.05
IDLH (mg/m3)	5	100
Action Level (mg/m3)	0.005	0.03

The total particulate dust action level for air at outdoor activity areas will be 100 micrograms per cubic meter (ug/m3) above background for a 15 minute average and greater than 150 micrograms per cubic meter (ug/m3) in the downwind area.

In addition to the primary COCs above, additional possible chemicals or substances that could be encountered might include asbestos, mercury, waste products and other unknown substances.

Field workers and supervisors shall remain vigilant to notice an unknown substance/container; make sure workers, citizens, the site conditions and the environment are safe; and immediately communicate the issue. If an unknown substance is encountered, the field team is to instigate a stop-work event, egress from the area safely and immediately, then call 911 (if appropriate) and the SSO as soon as possible to begin a safety assessment of the area and substance involving the proper safety management personnel.

This subsection is the same as that for Exterior Tasks in Section 5 of this HASP.

20.2.2 Potential Exposure Routes and Risk Mitigation Measures for COCs

XRF

A hand-held X-ray Fluorescence (XRF) analyzer will be used to screen indoor wall paint for potential presence of elevated lead concentrations using EPA Method 6200. This hand-held analyzer contains an X-ray tube as part of the operating/analyzing mechanism.

In the state of Indiana, the use of an analytical x-ray machine (XRF) is regulated under Indiana Code, Rule 8- 410 IAC 5-8.

The term radiation is used with all forms of energy—light, X-rays, radar, microwaves, and more. For the purpose of this manual, however, radiation refers to invisible waves or particles of energy from radioactive sources or X-ray tubes. High levels of radiation may pose a danger to living tissue because it has the potential to damage and/or alter the

chemical structure of cells. This could result in various levels of illness (mild to severe). The user of an XRF analyzer must understand the nature of radiation and how to safely use XRF analyzers.

The primary beam has ionizing radiation from an X-ray tube that is directed through an aperture in the radiation source housing for use in collecting X-ray fluorescence measurements. The state does not require the use of personnel monitoring devices when using an XRF as long as during normal operation and maintenance the primary beam is not exposed.

In addition, XRF users on this project shall receive use-specific basic radiological awareness training and training on the operation of the XRF (see below). The curriculum provided by this training will meet the intent of Indiana Division of Radiation Control and the requirements identified on the radiological license. This will include the following:

- 1) Identification of radiation hazards associated with the use of the equipment;
- 2) Significance of the various radiation warning, safety devices, and interlocks incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in such cases;
- 3) Proper operating procedures for the equipment;
- 4) Recognition of symptoms of an acute localized exposure; and
- 5) Proper procedures for reporting an actual or suspected exposure.

The Parsons field staff members that will be operating XRF devices have already obtained their valid Indiana Division of Radiation Control radiological license.

The following information shall be researched and reviewed by appropriate safety personnel and any person operating an XRF:

- 1) Review the radiation safety regulations and the device user manual.
- 2) Verify no federal, state or local permitting is required of use and transport.
- 3) When utilizing the XRF unit, the following standard operating procedures shall be implemented:
 - a) Keep regulatory paperwork/general user agreement with the unit.
 - b) Always use the safety wrist strap when using the unit.
 - c) Lock the analyzer up in a secure location when not in use.
 - d) When the XRF is in the case, ensure that the metal shield is in front of the point source/sample field.
 - e) Never point the X-ray source at yourself or anyone else and never hold the unit over your hands.
 - f) Verify instrument accuracy daily using the reference standard and understand the unit accuracy calibration values
 - g) Perform calibration/accuracy checks each time the unit is turned on when being used for the detection of lead sources.

- h) Monitor values during each accuracy/calibration check and notify an authorized manufacturer service vendor when values are more than +/- 20 units of the deviation resolution values.

The remainder of this subsection is the same as that for Exterior Tasks in Section 5 of this HASP.

20.2.3 Safety Data Sheets

This subsection is the same as that for Exterior Tasks in Section 5 of this HASP.

20.3 Physical Hazards

This subsection is the same as that for Exterior Tasks in Section 5 of this HASP.

20.4 Biological Hazards

This subsection is the same as that for Exterior Tasks in Section 5 of this HASP.

21.0 INTERIOR WORK - WORKER PROTECTION

The levels of personal protection are selected by evaluating the performance characteristics of the clothing against the requirements and limitations of the site- and task specific conditions.

21.1 Level of Protection

This subsection is the same as that for Exterior Tasks in Section 6 of this HASP.

21.2 Task-specific Protection Level

Protection discussed in the paragraphs that follow will be used to initiate each task. An upgrade or downgrade to the specified level of protection will be based on airborne particulate concentrations and skin contact. The Health and Safety Manager must approve any changes or adjustments to these levels of protection.

Task: Interior Sampling/Monitoring and Cleanup **Location:** USS Lead Site
Tasks, Indoors at Residences

Engineering/Administrative Controls: Yes ☒ No ☐

If yes, list: If the situation in or near a residence appears unsafe, immediately leave the area and call the SSO or 911 as appropriate. If a seemingly unsafe animal is in/on a private residence at or near site work, ask the owner/tenant to properly secure the animal during work to prevent injury to workers. For subsequent days, verify with the owner/tenant that the animal is secured before beginning work. Inspect all equipment prior to use. Use the right equipment for the job. Minimize dust generation in activities. Move items/furniture with teammates, use a dolly or other moving equipment to ease ergonomic issues.

	PPE Level	Range (ppm or mg/m ³)/Condition
Initial Level	Level D (high visibility vest as necessary, hard hat as appropriate, work or nitrile gloves, steel toed safety boots).	Stop work if visible dust is generated
Downgrade Level	N/A	N/A

Task: Interior (Indoor) Cleaning, Decontamination of Equipment and Sampling and Monitoring **Location:** USS Lead Site

Engineering/Administrative Controls: Yes ☒ No ☐

If yes, list: Discuss work and safety tasks with all involved workers before beginning a new task. Inspect all equipment prior to use. Use the right equipment for the job. Have fire extinguishers and spill control kits readily available. Plan work to minimize exposure to dust. Use caution for slippery surfaces when ground or floor is wet or damp. Use caution, proper number of people for the task and proper safe lifting/pulling techniques for moving/lifting gear. Periodically (during the first week of interior tasks and at least one day per month), the subcontractor will place a personal air exposure monitor (vapor-monitor badge or diffusion-detector tubes) on an interior worker and have the sample analyzed for lead and arsenic.

	PPE Level	Range (ppm or mg/m ³)/Condition
Initial Level	Modified Level D (high visibility vest, hard hat as appropriate, work and/or nitrile gloves, steel toed safety boots, Tyvek coveralls, Tyvek boot covers and dust mask as appropriate)	Use good housekeeping methods. Stop work if visible dust is generated
Downgrade Level	N/A	N/A

21.3 Hazard Analysis

The hazard analyses are detailed in the Activity Hazard Analyses (AHAs) in Appendix B of this document.

22.0 INTERIOR WORK - AIR/WORKPLACE SAMPLING

22.1 Action Levels and Method of Determination

COCs and action levels are listed in Section 5.

22.2 Real-time Monitoring

☒ No ☐ Yes

No real-time air monitoring will be performed for the interior/indoor tasks.

22.3 Air Sampling

☐ No ☒ Yes

Periodically (at least one day during the first week of interior tasks and then at least one day per month), the subcontractor will place a personal air exposure monitor (vapor-monitor badge or diffusion-detector tubes) on an interior worker and have the sample analyzed for lead and arsenic.

22.4 Noise Monitoring

☒ No ☐ Yes

No noise monitoring will be performed for this project.

22.5 Heat/Cold Stress Monitoring

☒ No ☐ Yes

If heat or cold stress monitoring is not conducted, protocols provided by the American Conference of Governmental Industrial Hygienists (ACGIH) will serve as guidance for dealing with heat and/or cold stress (see Appendix D).

22.6 Sampling and Monitoring Equipment

☐ No ☒ Yes

23.0 INTERIOR WORK - PERSONNEL TRAINING

This subsection is the same as that for Exterior Tasks in Section 7 of this HASP.

23.1 Pre-assignment and Annual Refresher Training

This subsection is the same as that for Exterior Tasks in Section 7 of this HASP.

23.2 Site Supervisor Training

This subsection is the same as that for Exterior Tasks in Section 7 of this HASP.

23.3 Site Safety Officer Training

This subsection is the same as that for Exterior Tasks in Section 7 of this HASP.

23.4 Initial HASP Review

In addition to 29 CFR 1910.120(e) training, all site employees must review the HASP and sign the HASP acceptance log prior to initiating field activities. Key contractor and subcontractor field team members will participate in a safety meeting prior to field activities and convey the information to the rest of the field staff. The review must include the following:

- **Project Personnel Roles and Responsibilities**
Personnel will understand the lines of authority regarding health and safety and site personnel roles and responsibilities.
- **Site-specific Health and Safety Hazards**
Personnel will be informed of specific hazards related to the site and site operations, such as health hazards of site chemicals and specific safety hazards of process equipment.
- **Personal Protective Equipment**
Personnel will be trained in the proper use of PPE.
- **Safe Work Practices/Engineering Controls**
Personnel will be informed of appropriate work practices and engineering controls that will reduce risk of exposure to site hazards.
- **Communication Methods**
Personnel will be informed of means for normal site and emergency communication.
- **Medical Surveillance Program**
Personnel will be informed of the medical surveillance requirements, including recognition of symptoms and signs of exposure.
- **Site Control Methods**
Personnel will understand site methods used to reduce exposure to on- and off-site personnel.
- **Decontamination Procedures**
Personnel will be trained in proper decontamination procedures, including decontamination of PPE, equipment, and vehicles.

- **Emergency Response**

Personnel will be trained to respond properly in the event of an emergency.

23.5 Daily Briefings

Daily briefings will be conducted before each work shift at a location designated by the SSO or site supervisor. All personnel will attend this briefing in order to participate in field activities for that day. Attendance at the briefing will be documented in the Daily Safety Briefing Log (see Appendix A) or the SSO's field logbook.

23.6 Other Required Training

Interior Tasks, Site Orientation Training

The SSO will provide a work area orientation to all project workers.

Interior Tasks, Training for Video Collection and Photo-documentation for Preconstruction Property Visit and Survey

Field staff members that will collect video and/or photo documentation for the Preconstruction Property Visit and Survey will be trained prior to the property visit and survey.

Interior Tasks, HEPA Vacuum Use Training

Field staff members that will operate a HEPA Vacuum will read the manufacturers use manual and receive onsite training from an experience user.

Interior Tasks, XRF Training for Lead-Based Paint Screening on Wall Paint

The Parsons field staff members that will be operating XRF devices have already obtained their valid Indiana Division of Radiation Control radiological license.

23.7 Visitor Procedures

All on-site visitors will be escorted by a Parsons representative and will be required to review and agree to comply with provisions of this HASP. In addition, visitors will sign in and out of the site logbook.

23.8 Health and Safety Audits

See Section 7 of this plan. The site safety audit form is included in Appendix A.

24.0 INTERIOR WORK - SITE CONTROL/ILLUMINATION

Site control measures are as follows:

- SSO will depict the actual site layout in SSO logbook daily, or on site figures/plans and as needed thereafter.
- Appropriate containers will be used for collection of trash.
- Mobile phones will be established as the primary means of communication prior to the beginning of site work.
- The buddy system will be employed to the extent feasible to assist in event of an emergency.

24.1 Illumination

Hours of field operation: 7:00AM to 6:00PM (maximum)

Describe lighting source: Daylight through windows and/or residence interior lights.

Work to be performed inside must have adequate illumination for the tasks. Utilize residence indoor lighting. Evaluate work areas and tasks for lighting needs. Utilize appropriate auxiliary lighting including area work lights (110v or battery powered), flashlights, battery powered lanterns and/or headlamps. Also see Section 5.3 of this HASP and refer to 29 CFR 1910.120 (m).

25.0 INTERIOR WORK - DECONTAMINATION

This subsection is the same as that for Exterior Tasks in Section 10 of this HASP.

26.0 INTERIOR WORK - SANITATION

Sanitation procedures for the Interior Tasks are the same as those in Section 11 for the Exterior Tasks above.

27.0 INTERIOR WORK - EMERGENCY RESPONSE PLANNING

This subsection is the same as that for Exterior Tasks in Section 12 of this HASP.

APPENDIX A PROJECT FORMS

1. Site Safety Audit Form
2. HASP Training and Medical Record
3. Pre-Field Work Safety Meeting
4. Employee/Contractor Training Acknowledgement
5. Risk Mitigation Two-Week Look-Ahead Form
6. Notice of Noncompliance with Safety and Health Regulations
7. Notice of Subcontractor Violation of Safety and Health Regulations
8. Weekly Safety and Health Inspection Checklist
9. Activity Hazard Analysis Training Record
10. Mobilization / Kickoff Safety Meeting
11. Subcontractor Competent Person Form
12. Safety Performance Evaluation Form
13. Project Manager Safety Expectations Form
14. Safety meeting Sign-In Sheet
15. Competent Person and Activity Hazard Analysis Requirements

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Site Safety Audit Observation/Engagement Form

Site Name / Location: _____

Date: _____

Time: _____

Company & Onsite Supervisor : _____

Observer Name & Company: _____

Observer Title: _____ Observer Company _____

Job Task Observed (primary job associated with work activities observed)

Exterior Tasks	Exterior Tasks (continued)	Offsite Soil Stockpile Tasks	Interior Tasks
<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Surveying	<input type="checkbox"/> Housekeeping	<input type="checkbox"/> Housekeeping
<input type="checkbox"/> Clearing Yard	<input type="checkbox"/> Waste Management	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Sampling/Monitoring
<input type="checkbox"/> Excavation	<input type="checkbox"/> Other	<input type="checkbox"/> Dust Control	<input type="checkbox"/> Cleaning
<input type="checkbox"/> Sampling/Monitoring		<input type="checkbox"/> Soil Handling	<input type="checkbox"/> Decontamination
<input type="checkbox"/> Backfill		<input type="checkbox"/> Sampling/Monitoring	<input type="checkbox"/> Waste Management
<input type="checkbox"/> Topsoil/Landscaping		<input type="checkbox"/> Waste Management	<input type="checkbox"/> Other

Description of Specific Task Observed, Environmental/Site Conditions (e.g. weather, traffic, active/inactive site, etc.)

Positive Comments (specific, descriptive examples of significant correct behaviors so Observee knows what to continue)

Conclusions from Feedback Session: Why the At-Risk Items occurred and how Root Cause(s) was determined.

Session Conducted By: _____ Date: _____

Name of Observee's Supervisor: _____ Time: _____

At-risk Observations, causes and Corrective Actions - What was the Outcome of the Feedback / What do the 5 Why's Tell Us? What needs to be done to prevent reoccurrence

At-Risk Items	Corrective Actions	Solution(s) (must match Root Cause)	Person Responsible	Target Completion Date	Actual Completion Date

Results of Verification (were solutions implemented?) and Validation (were implemented solutions effective?)

Solution	Verifier's Name	Job Title	Company	Date	
Solution	Validator's Name	Job Title	Company	Date	

Field Safety Audit Form

Company//Supervisor/Task Audited:			Audit Date/Time:		
Auditor Name:			Location of Audit:		
#	PERSONAL PROTECTIVE EQUIPMENT	Safe / Positive	At-Risk	COMMENTS	
1	Foot Protection				
2	Hearing Protection				
3	Hand Protection				
4	Eye/Face Protection				
5	Tyvek Boot Covers, Pants or Coveralls (as necessary)				
6	Respiratory Protection				
7	Head Protection				
8	Reflective Vest, Clothing etc.				
9	Other				
BODY USE AND POSITIONING		Safe / Positive	At-Risk	COMMENTS	
10	Lifting/Carrying/Pushing/Pulling				
11	Mounting and Dismounting				
12	Pinch Points				
13	"Line of Fire"				
WORK ENVIRONMENT		Safe / Positive	At-Risk	COMMENTS	
14	Area free of Trip/Slip Hazards				
15	Housekeeping / Storage				
16	Work Zone Defined And /or Secured				
17	Lighting/Illumination				
18	Storage and Disposal of Sample and Waste Materials				
19	Other (Specify)				
OPERATING PROCEDURES		Safe / Positive	At-Risk	COMMENTS	
20	HASP Readily available and current				
21	Safety Toolbox meeting conducted, all signed in				
22	First Aid Kit readily available				
23	Temporary Road/Alley Traffic Signs/Flagger				
24	Interfaces with Other Personnel / Access Agreements				
25	Subsurface Structures Checklist Utilized and Structures Identified and documented				
26	Other (Specify)				
TOOLS/EQUIPMENT		Safe / Positive	At-Risk	COMMENTS	
27	Hand Tool Selection, Condition & Use				
28	Power Tool Selection, Condition & Use				
29	Equipment Condition & Use, Inspection Forms Completed				
30	Vehicle Operations (Spotter/Alarm, Seatbelts, no phone use while driving)				
	Comments				
31					

HASP Training-Medical Record

(see Excel file)

Pre-Field Work Safety Meeting

<p align="center">PARSONS</p> <p align="center"><i>PRE-FIELD WORK SH&E MEETING</i></p> <p align="center"><i>SITE-SPECIFIC SH&E REVIEW CHECKLIST</i></p> <p align="center"><i>(SHEET 1 OF 3)</i></p>	
DATE:	
SUBCONTRACTOR REPRESENTATIVE:	
PHONE:	
PROJECT LOCATION:	
PARSONS PROJECT MANAGER:	
PHONE:	
SUBCONTRACTOR SH&E REPRESENTATIVE:	
PHONE:	
PARSONS SH&E REPRESENTATIVE:	
PHONE:	
<p>THIS CHECKLIST SUPPORTS THE IDENTIFICATION OF WORK ACTIVITIES AND PROGRAMS IN A PRE-FIELD WORK SH&E MEETING. THIS LIST ALSO INCLUDES ITEMS IDENTIFIED THROUGH THE SUBCONTRACTOR REVIEW AND HIGH-RISK ACTIVITIES IDENTIFIED THROUGH THE PROJECT SPECIFICATION REVIEW. HIGH-RISK ACTIVITIES MUST BE FOLLOWED UP DURING THE FIELD WORK WITH TRAINING, WRITTEN PLANS AND/OR A SPECIFIC ACTIVITY HAZARD ANALYSIS (AHA).</p> <p>THIS LIST SHOULD BE REVIEWED WITH PROSPECTIVE BIDDERS DURING THE PRE-BID MEETING.</p> <p>NOTE: USE CHECK BOX AND ADD SPECIFICS AND DETAILS AS APPLICABLE (NEXT TO THE CALLOUTS)</p>	
SAFETY & HEALTH	
<input type="checkbox"/>	SITE-SPECIFIC SAFETY, HEALTH AND ENVIRONMENTAL PLANS
<input type="checkbox"/>	COMPETENT/QUALIFIED PERSON DOCUMENTATION
<input type="checkbox"/>	SH&E AUDITS/INSPECTIONS
<input type="checkbox"/>	SUBCONTRACTOR RESPONSIBILITIES
<input type="checkbox"/>	SITE ORIENTATION REQUIREMENTS
<input type="checkbox"/>	PRE-FIELD WORK SH&E MEETING/DATE
<input type="checkbox"/>	CRANE INSPECTION CERTIFICATION
<input type="checkbox"/>	PERSONAL PROTECTIVE EQUIPMENT (PPE) (WORK ACTIVITIES OR WORK SITE REQUIRES HEARING PROTECTION/USING RESPIRATORS/SPECIAL PROTECTIVE CLOTHING/OTHER)
<input type="checkbox"/>	EXPOSURE TO GENERAL PUBLIC (WORK ACTIVITIES OR LOCATION REQUIRES SPECIAL PRECAUTIONS TO PROTECT THE PUBLIC)
FIELD WORK SAFETY ISSUES	
<input type="checkbox"/>	EXCAVATIONS/TRENCHING
<input type="checkbox"/>	POWERED INDUSTRIAL TRUCKS, FORK LIFTS
<input type="checkbox"/>	CRANE WORK/HEAVY LIFTS, RIGGING
<input type="checkbox"/>	WORK INVOLVING HAZARDOUS MATERIALS
<input type="checkbox"/>	ELECTRICAL TIE-INS/LOCKOUT – TAGOUT

<input type="checkbox"/>	<i>AERIAL LIFT WORK – SCISSOR LIFTS, EXTENDABLE BOOM, ETC.</i>
<input type="checkbox"/>	<i>UNDERGROUND, CAISSONS, COFFERDAMS</i>
<input type="checkbox"/>	<i>SCAFFOLD ERECTION/WORK</i>
<input type="checkbox"/>	<i>DEMOLITION</i>
<input type="checkbox"/>	<i>MARINE WORK/LIVE BOATING</i>

PARSONS

**PRE-FIELD WORK SH&E MEETING FORM
SITE-SPECIFIC SH&E REVIEW CHECKLIST
(SHEET 2 OF 3)**

FIELD WORK SAFETY ISSUES (CONTD.)

<input type="checkbox"/>	HEAVY HAULING
<input type="checkbox"/>	CONCRETE
<input type="checkbox"/>	DIVING
<input type="checkbox"/>	WORK ADJACENT TO PRODUCTION AREAS
<input type="checkbox"/>	SITE SECURITY/VISITOR CONTROL/PUBLIC AREAS
<input type="checkbox"/>	PERMITS (EXCAVATIONS, SCAFFOLDING, DEMOLITION, TRAFFIC, CONFINED SPACE, HOT WORK, LINE BREAKING, ETC.)
<input type="checkbox"/>	CONFINED SPACE (CONFINED SPACE ENTRY IS REQUIRED)
<input type="checkbox"/>	WELDING AND CUTTING (ACETYLENE/GAS CUTTING, ARC WELDING, SOLDERING AND BRAZING)
<input type="checkbox"/>	LADDERS (PORTABLE LADDER USE IS REQUIRED)
<input type="checkbox"/>	TRAFFIC CONTROL (WORK IS ON OR NEAR HIGHWAYS, ROADS, OR MASS TRANSIT)

MEDICAL

<input type="checkbox"/>	SUBSTANCE ABUSE SCREENING
<input type="checkbox"/>	EMERGENCY PROCEDURES
<input type="checkbox"/>	SITE SECURITY
<input type="checkbox"/>	SMOKING POLICY
<input type="checkbox"/>	MEDICAL SERVICES REQUIREMENTS
<input type="checkbox"/>	TREATMENT LOCATIONS, ADDRESSES, AND/OR PHONE LIST

ENVIRONMENTAL

<input type="checkbox"/>	ENVIRONMENTAL HAZARDS
<input type="checkbox"/>	AIR POLLUTION/EMISSIONS AND REQUIRED REPORTING
<input type="checkbox"/>	WASTEWATER DISCHARGES
<input type="checkbox"/>	DRINKING WATER
<input type="checkbox"/>	MANAGEMENT OF HAZARDOUS MATERIALS AND HAZARDOUS AND SOLID WASTES
<input type="checkbox"/>	EMERGENCY RESPONSE TO SPILLS AND RELEASES ENVIRONMENTAL ASSESSMENTS
<input type="checkbox"/>	PROTECTED ECOLOGICAL AND CULTURAL RESOURCES
<input type="checkbox"/>	SPECIFIC REPORTS ON TOXIC OR HAZARDOUS CHEMICALS USAGE AND STORAGE (REQUIRED BY ENVIRONMENTAL REGULATION)
<input type="checkbox"/>	MATERIALS TO BE RECYCLED

Employee/Contractor Training Acknowledgement

PARSONS
Employee / Subcontractor Training Acknowledgement

Name of Trainer: _____

Training Subject: _____

Training materials used: _____

Name of employee: _____

Date of hire/assignment: _____

I, _____, hereby certify that I have received training as described above in the following areas:

- Names of personnel responsible for site safety and health.
- Safety, health or other hazards at the site.
- The proper use of personal protective equipment.
- The potential occupational hazards in general in the work area and associated with my job assignment.
- Work practices by which a worker can minimize risks from hazards.
- Safe use of engineering controls and equipment on the site.
- Acute effects of compounds on the site.
- Decontamination procedures.
- General safety requirements indicate the safe work conditions, safe work practices and personal protective equipment required for my work.
- The hazards of any chemicals to which I may be exposed and my right to information contained on material safety data sheets for those chemicals, and how to understand this information.
- My right to ask questions, or provide any information to the employer on safety either directly or anonymously without any fear of reprisal.
- Disciplinary procedures the employer will use to enforce compliance with general safety requirements.

I understand this training and agree to comply with general safety requirements for my work area.

Employee Signature

Date

Risk Mitigation Two-Week Look-Ahead Form

Parsons
SH&E Risk Mitigation 2-Week Look-Ahead Form

SH&E Plan for Week Ending:		Subcontractor:	
Project/ Location:		Meeting Date:	
Plan Prepared by:		Dated:	

Next Two Weeks Scope of Work:

Identified SH&E Risks/Exposures/Hazards Issues:

Identify Tasks requiring permitting (e.g., dewatering permit) or involving environmental regulatory issues (e.g., generation of new, uncharacterized waste):

Tasks with environmental risk of significant spills or releases:

Control Measures:

Additional Activity Hazards Analysis Required:

Subcontractors Mobilizing/Demobilizing:

Audit/Inspections Scheduled:

Competent Person Changes:

Planned Orientation/Training:

Recommendations/Comments/Concerns:

Note: This information should be incorporated into the meeting minutes.

Notice of Noncompliance with Safety and Health Regulations

PARSONS

Notice of Noncompliance with Safety, Health and Environmental Regulations

Under conditions of this enforcement procedure check all items that apply:

<input type="checkbox"/>	1.	You are being notified of this violation and should take corrective action to prevent a reoccurrence. The corrective action shall be documented to the Parsons Construction Management representative immediately.
<input type="checkbox"/>	2.	You must submit a plan for compliance to your Parsons Construction Management representative and the Construction Safety Manager within two days of receipt of this letter. The compliance plan must include the means or methods of compliance and the date that the requirements for compliance will be completed. Once compliance has been achieved, a follow up letter must be sent to the Parsons Construction Management representative and Construction Safety Manager. Failure to comply will result in disciplinary action against your Company.
<input type="checkbox"/>	3.	You are required to review the stated procedures with your Parsons Construction Management representative. Work may not commence on the site until the review is complete and the Subcontractor responds formally that the procedure is understood and will comply.
<input type="checkbox"/>	4.	You are required to review the stated procedures with your Parsons Construction Management representative. Work may not commence on the site until the review is complete and you must confirm formally the disciplinary action to be taken against the supervisor and employees.
<input type="checkbox"/>	5.	All work on the site will stop until the Parsons Construction Management representative reviews all the facts with the Subcontractor and determines if the contract between the parties will be terminated.

Sincerely,

Parsons Representative

cc:

Issuing Construction Manager Representative

Job File

GBU SH&E Director

Project Manager

PARSONS**Notice of Subcontractor Violation of Safety, Health, and Environmental Regulations**

Date:

Contractor Name:

Address:

Attention:

This letter officially notifies you that you have been found to be in violation of the following Safety, Health, and Environmental Regulations:

on (date) _____, by _____

Confined Space
Entry

Lockout/Tagout



Hot Work

Personal protective
equipmentKnowledge of
environmental
requirementsAwareness of
warning
alarmsEvacuation
routes

Backup alarms

Assembly locations



Fall Protection



Scaffolding

Environmental/hazardous
material storage

Trenching

Safe Work
PracticesSecurity
Practices

Spill to the environment

Waste storage or
disposalWastewater
discharge

Buried items

Violation of environmental
regulation

Other:

Environmental:

This/These violations occurred at the following locations:

At the following times

and dates:

The name of the employee(s) was (were):

PARSONS
Weekly SH&E Inspection Checklist (Sheet 1 of 2)

	Week Ending Date:
Project Name:	Project Number:
Name of Auditor:	Signature:
Check each box during your inspection or indicate N/A. Substandard conditions found must be identified on the back of this checklist	
	Electrical: temporary power, circuits marked, GFCI protection, damaged cords, cords protected, correct outlets, and signage.
	Environmental: Air emissions controlled, hazard com program, specific MSDS sheets, fuel signage, spillage dike, dust control, HAZMAT storage, and waste disposal.
	Excavations: Guarded, Soil Condition, Trenching Controls, Blue Stake/Equivalent, Daily Inspections Subcontractor, and Proper Access.
	Fire Safety: Extinguishers; Proper Size, Numbers, Proper Locations, Hose Stations, Hot Work Permit, Fuel Storage.
	Framing Activities: Proper Positions, Monitor, Fall Protection, Housekeeping, Forklift Activity, Training, and Tool Use.
	Guarding: Floors, Walls, Windows, Leading Edge, Roof, Elevator Shafts, Open Holes, Material, Quality, and Handrail
	Housekeeping: Office, Walkways, Waste Material, Lay Down Yard, Grounds, and Subcontractor Areas, Food Debris.
	Ladders: Height, Secured Top/ Bottom, Condition, Employee Position; Three Points of Contact.
	Material Handling: Rigging, Material Condition, Training, Tasks, Proper Lifting, Wheel Barrows, Stacking/Storage.
	Medical: First Aid Kits, Numbers Posted, Address Knowledge, Nearest Emergency Assistance, CPR/First Aid Training.
	Mobile Equipment: Inspections, Condition, Backup Alarms, Leaks, Fuel Storage, Proper Parking, and Training.
	PPE: Hearing, Head, Hand, Eye, Foot, Fall, Seatbelts, Respiratory,
	Sanitary: Drinking Water, Toilets Clean and Adequate, Soap and Water for Washing
	Scaffolds: Component Damage, Footing, Secured, Guardrail, Training, Inspections, Pins & Bracing, Planking, and Ladders.
	Tools: Damage, Cords, Blades, Guards, Hoses, Handles, Switches, Training, Proper Use, Storage, Adequate.
	Training: Forklift, Man Lift, Water Truck, Orientation, Task, Hazards, Power Tools, Scaffolds, and Trenching.
	Welding: Hot Work Permit, PPE, Gas Checks, Confined Space, Tank Storage, Equipment Inspections, and Fire Protection

	Miscellaneous: Any condition or behavior not identified on this checklist.
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PARSONS Weekly SH&E Inspection Checklist (Sheet 2 of 2)					
				Week Ending Date:	
Project Name:				Project Number:	
Name of Auditor:				Signature:	
Hazard Type	1.	Improper or Inadequate Guarding	8.	Substandard Housekeeping	
	2.	Improper Wiring	9.	Hazardous Environmental Conditions	
	3.	Defective Tools, Equipment, Substances	10.	Radiation Exposures	
	4.	Hazardous Arrangements	11.	Congestion or Restricted Movement	
	5.	Inadequate Illumination	12.	Inadequate Warning System	
	6.	Inadequate Ventilation	13.	Fire & Explosive Hazard	
	7.	Improper Personal Protective Equipment	14.	Other:	
Basic Causes	1.	Inadequate Engineering	7.	Inadequate Leadership & Supervision	
	2.	Normal Wear & Tear	8.	Physical Incapacity	
	3.	Inadequate Purchasing	9.	Lack of Knowledge	
	4.	Inadequate Maintenance	10.	Improper Motivation	
	5.	Inadequate Work Standards	11.	Mental Incapacity	
	6.	Abuse	12.	Other:	
Hazard Classification	Class A: Likelihood of Death Class B: Likelihood of Serious Injury Class C: Likelihood of Minor Injury				
Items	Hazard Type	Basic Cause	Hazard Class	Location	Remedial Action(s)

Comments:

Activity Hazard Analysis Training Record

This image shows a blank sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook or worksheet page.

Mobilization/Kickoff Safety Meeting